

Amendments to the Specification

Please replace the paragraph beginning at page 36, line 12 with the following:

Described below are exemplary methods for identifying compounds that interact with cytochrome c and/or a polypeptide having acetylation or deacetylation activity and can have an effect on apoptosis. Preferably, compounds can be identified which interact with, e.g., bind to, cytochrome c or a polypeptide having acetylation or deacetylation activity, and increase acetylation. Deacetylation of a ~~substrate~~ ~~substrates~~ such as cytochrome c has been found to increase substrate-induced apoptosis, e.g., cytochrome c induced apoptosis. Cytochrome c can be, for example, the mature protein or a fragment thereof. In a preferred embodiment, the cytochrome c is human cytochrome c. In many instances, such deacetylated substrates may play a role in apoptosis of stressed and/or damaged cells, e.g., DNA damaged cells, e.g., cancer cells. Thus, in some embodiments, it is desirable to identify compounds which interact with a polypeptide having deacetylation activity and increase expression and or activity of the polypeptide, thereby increasing apoptosis in a cell, e.g., a cancer cell. The phrase "deacetylating a substrate" or "deacetylating cytochrome c" refers to the removal of one or more acetyl groups (e.g., $\text{CH}_3\text{CO}^{2-}$) from the substrate such as cytochrome c that is acetylated on at least one amino acid residue. Cytochrome c can be deacetylated in the presence or absence of DNA damage or oxidative cellular stress. The DNA damage can be caused by, for example, ionizing radiation (e.g., 6 Gy of ionizing radiation), or a tumor or some other uncontrolled cell proliferation. "Acetylation status" refers to the presence or absence of one or more acetyl groups (e.g., $\text{CH}_3\text{CO}^{2-}$) at one or more lysine (K) residues of a substrate, e.g., a transcription factor. For example, the presence of an acetylate ~~group~~ ~~groups~~ can be found at one or more of places of the cytochrome sequence depicted in SEQ ID NO:8 ~~SEQ ID NO:16~~. "Altering the acetylation state" refers to adding or removing one or more acetyl groups (e.g., $\text{CH}_3\text{CO}^{2-}$). For example, adding or removing one or more acetyl groups of cytochrome c at one or more lysine (K) residues of SEQ ID NO:8 ~~SEQ ID NO:16~~.